

Technical Data Sheet



Diamond Asa C1030H

Acrylonitrile Styrene Acrylate

LyondellBasell Industries

Engineering Plastics

Product Description

Diamond ASA C1030H is a High-Heat Acrylonitrile Styrene Acrylate (ASA) product with excellent Heat-Aging and Weathering properties; Very High Gloss; High Distinctiveness of Image (DOI). ASA C1030H is readily processed by Extrusion and Injection Molding and is available in North America.

General

Features	• Good Colorability	• Good Weather Resistance	• High Gloss
Agency Ratings	• EC 1907/2006 (REACH)	• EU 2002/96/EC (WEEE)	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ¹	1.08	1.08 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 Kg ²	6.0 g/10 min	6.0 g/10 min	
230°C/3.8 Kg	1.4 g/10 min	1.4 g/10 min	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield ³	6960 psi	48.0 MPa	
Break ⁴	5510 psi	38.0 MPa	
Tensile Elongation ³ (Break)	28 %	28 %	ASTM D638
Flexural Modulus - 1% Secant ⁵ (0.125 In (3.18 Mm))	362000 psi	2500 MPa	ASTM D790
Flexural Strength ⁵ (Yield)	4900 psi	33.8 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	3.3 ft-lb/in	180 J/m	ASTM D256
Instrumented Dart Impact ⁶			ASTM D3763
Total Energy	372 in-lb	42.0 J	
-4°F (-20°C), Total Energy	53.1 in-lb	6.00 J	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-scale)	101	101	ASTM D785

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 Psi (0.45 Mpa), Unannealed, Injection Molded	208 °F	98.0 °C	
264 Psi (1.8 Mpa), Unannealed	183 °F	84.0 °C	
Vicat Softening Temperature			
--	234 °F	112 °C	ASTM D1525 ⁷
--	210 °F	99.0 °C	ASTM D1525 ⁸

Technical Data Sheet

Diamond Asa C1030H

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics



Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.02 %	0.02 %
Suggested Shot Size	40 to 70 %	40 to 70 %
Rear Temperature	446 to 500 °F	230 to 260 °C
Middle Temperature	450 to 500 °F	232 to 260 °C
Front Temperature	455 to 500 °F	235 to 260 °C
Nozzle Temperature	428 to 500 °F	220 to 260 °C
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	160 to 180 °F	71 to 82 °C
Injection Rate	Fast	Fast
Back Pressure	75.0 to 150 psi	0.517 to 1.03 MPa

Notes

- ¹ ASTM D792A
- ² Procedure A
- ³ Type I, 2.0 in/min (50 mm/min)
- ⁴ 2.0 in/min (50 mm/min)
- ⁵ 0.079 in/min (2.0 mm/min)
- ⁶ 22.0 ft/sec (6.70 m/sec)
- ⁷ Loading 1 (10 N)
- ⁸ Rate B (120°C/h), Loading 2 (50 N)

Notes

These are typical property values not to be construed as specification limits.